Saskatchewan Agriculture

Farm Business Management

Farm Business Analysis, 1982
Beef Enterprise

Preface

This publication deals with the financial and herd performance of a group of Saskatchewan beef producers in 1982. The data is obtained from the actual financial and production records of farm operators. It is collected, analyzed and published on an annual basis.

The purpose of this program is threefold:

1. To obtain accurate, up-to-date data on the financial and physical performance of Saskatchewan beef producers;

2. To provide information that will enable producers to make better production and financial decisions; and

3. To assist extension workers, lending agencies and agri-business to obtain a better understanding of the financial requirements of Saskatchewan livestock enterprises.

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This publication was prepared by Don Barber and Dean Dyck. The contributions of many people who assisted in compiling and reviewing this material are gratefully acknowledged. A special thank you is extended to the Saskatchewan farmers who allowed access to their records and provided the necessary supplementary information for the analysis.

Farm Business Management Section,
Saskatchewan Agriculture

Table of Contents

	Page
BEEF ENTERPRISE	
Introduction	1
General	1
Summary of Results for All Groups	2
Table 1: Cow-Calf Enterprises	3
Table 2: Cow Yearling Enterprises	4
Table 3: Cow Finish Enterprises	5
Table 4: Cow Yearling Enterprises That Purchased Feeders	6
Table 5: Cow Finish Enterprises That Purchased Feeders	7
Break Even Selling Prices	8

FARM BUSINESS ANALYSIS - 1982
Beef Enterprises

Introduction

This study deals with the financial and herd performance of a group of Saskatchewan beef producers in 1982. This information was obtained from the analysis of actual financial and production information gathered from one-hundred and fifty farms, mostly grain and beef. Farms were categorized for analysis by type. The following includes cost of production statements for each type of enterprise.

Care must be exercised in interpreting the income and cost statements in this report. While these averages are based on actual farm data it must be recognized that the sample is not a statistically drawn sample and thus the results should not be interpreted as a provincial average. The information in this publication does, however, provide a good guide to the costs and returns associated with beef enterprises.

General

The total number of beef animals in Saskatchewan reached a peak in 1976 and has shown a steady decline since. Statistics Canada figures show on January 1, 1982 there were 955,000 beef cows and 1,097,000 other beef animals on Saskatchewan farms. The income derived from this number of beef animals accounted for approximately 11% of the total cash receipts for Saskatchewan in 1982.

The beef producers participating in this study obtained good production levels. However, the net income was quite low. While the net farm income showed an improvement from 1981 it is still well below the level required to provide a fair return to investment, labour and management.

Method and Assumptions

The records of one-hundred and fifty farmers were analyzed to provide the cost of production and comparative analysis statements. The following methods and assumptions were used:

(a) The income was recorded as shown on the farm records with the exception of the inventory change. The figure for inventory change was calculated using the following formula: Number of births plus number of animals purchased minus number of deaths minus number of animals sold. The value used for inventory change was obtained from the end of year inventory statement completed by the participating producers. Using this method to calculate inventory change will result in the income reflecting the value of the actual 1982 production.

(b) Most of the expenses were taken from the farm records. Those which were not are:

(i) Pasture Rent - Where producers rented pasture, the actual rental fee was recorded. If no rental was recorded a grazing cost of $30 per cow was recorded.

(ii) Feed - Each farmer recorded the amount of feed used. The following values were assigned to each feed type:

Feed Wheat	$ 176/tonne
Feed Barley	$ 115/tonne
Feed Oats	$ 110/tonne
Feed Hay	$ 60/tonne
Feed Straw	$ 20/tonne

Green feed and silage was converted to hay equivalent.

(iii) Operating Interest - An allowance for interest on operating cost is calculated based on 50% of the total cash expenses at an interest rate of 15%. Livestock sales will repay part of the operating costs throughout the year.

(c) Net Cash Income - Is the difference between the total cash receipts and the total cash expenses. This amount repesents the actual dollars that a farmer has to cover his living costs, debt payments, interest on loans incurred for capital purchases and to accumulate savings;

(d) Net Farm Income - Is the difference between the total value of production and the total cost of production. This amount represents a return to the farmer's labour and management, and a return to the total investment in the farm.

Summary of Results for All Groups

	Cow Calf	Cow Yearling	Cow Finish	Cow Yearling*	Cow Finish*
No. of Cows	41	41	48	31	49
No. of Calves	37	38	42	29	43
No. of Animals Sold	36	32	33	32	61
No. of Animals Bought	1	1	1	26	45
			$ Per Cow		
Income	342	465	623	969	1,397
Cash Costs	334	397	500	885	1,072
Non-Cash Costs	25	37	29	27	45
Total Costs	359	434	529	912	1,117
Net Farm Income	-17	31	94	57	280
			$ Per Animal Sold		
Income	390	596	906	939	1,122
Cash Costs	380	509	727	857	861
Non-Cash Costs	28	47	42	26	36
Total Costs	408	556	769	883	897
Net Farm Income	-19	40	137	56	225

* These two groups of farms purchased feeders as well as feeding their own calves.

Observations:

Tables 1 to 5 show the cost of production on a per cow basis for each specific group. All five groups except the cow/calf group showed a positive net farm income with the cow to finish operations showing the best return and the cow calf showing a negative return.

Finishing a calf to slaughter weight does require additional labour management and capital. The figures obtained from this study for both last year and this year indicate that this additional investment of time and money has shown good returns.

Table 1
Cow-Calf Enterprises
$ Per Cow

	1981 All Farms	1982 All Farms	1982 Above Average Farms
Number of Cows	46	41	51
Calf Percent	91%	90%	87%
Number of Bulls	2	1	2
Investment			
Buildings	$ 140	$ 39.39	$ 19.84
Equipment	152	136.89	119.30
Livestock	596	580.81	615.42
Total Investment	$ 888	$ 757.09	$ 754.56
Income			
Bulls	$ 17.00	$ 4 87	$ 5.69
Cows	59.39	61.34	69.73
Calves	234.65	305.07	117.25
Feeders	-	7.26	159.61
Slaughters	-	-	6.92
Other Income	1.22	1.56	2.45
Inventory Change	28.85	-37.87	-17.08
Total Income	$ 341.11	$ 342.23	$ 344.57
Cash Expenses			
Bulls Purchased	$ 18.96	$ 6.14	$ -
Cows Purchased	27.83	13.17	3.25
Feeders Purchased	23.72	4.22	6.41
Total Livestock Purchased	70.51	23.53	9.66
Grazing Costs	30.35	19.98	20.31
Feed Grain	77.28	87.61	65.75
Roughage	112.74	58.59	60.78
Bedding	25.89	24.54	22.51
Total Feed Cost	246.26	190.72	169.35
Fuel & Lubrication	21.59	16.22	11.69
Machinery Repairs	34.96	12.46	8.73
Total Machinery Cost	56.55	28.68	20.42
Vet/Medicine & Supplies	23.65	21.48	24.35
Building/Fence Repairs	11.91	6.83	5.51
Miscellaneous	50.96	39.29	33.53
Total Other Cost	86.52	67.60	63.39
Operating Interest	41.29	23.29	19.71
Total Cash Expenses	$ 501.13	$ 333.82	$ 282.53
Net Cash Income	$-160.02	$ -8.41	$ 62.04
Non-Cash Expenses			
Building Depreciation	$ 5.13	$ 1.73	$ 1.04
Machinery Depreciation	31.30	22.93	19.65
Total Non-Cash Expenses	$ 36.43	24.66	20.69
Total Cost of Production	$ 537.56	$ 358.48	$ 303.22
Net Farm Income	$-196.45	$ -16.25	$ 41.35

Table 2
Cow Yearling Enterprises
$ Per Cow

	1981 All Farms	1982 All Farms	1982 Above Average Farms
Number of Cows	51	41	47
Calf Percent	92%	93%	88%
Number of Bulls	2	1	2
Investment			
Buildings	$ 220	$ 72.54	$ 29.41
Equipment		203.30	135.48
Livestock	573	585.51	710.22
Total Investment	$ 793	$ 861.35	$ 875.11
Income			
Bulls	$ 10.41	$ 9.78	$ 11.04
Cows	72.18	47.51	53.32
Calves	-	102.05	70.45
Feeders	340.00	244.76	311.29
Slaughters	7.80	31.58	35.96
Other Income	-	1.34	-
Inventory Change	51.47	27.98	39.30
Total Income	$ 481.86	$ 465.00	$ 521.36
Cash Expenses			
Bulls Purchased	$ 16.55	$ 9.85	$ 8.60
Cows Purchased	20.98	15.14	10.81
Feeders Purchased	25.55	.98	1.21
Total Livestock Purchased	63.08	25.97	20.62
Grazing Costs	28.96	22.56	25.77
Feed Grain	104.33	104.27	89.51
Roughage	105.26	89.39	87.11
Bedding	35.51	22 71	22.74
Total Feed Cost	$ 274.06	$ 238.93	$ 225.13
Fuel & Lubrication	17.64	19.93	16.94
Machinery Repairs	13.10	15.95	13.40
Total Machinery Cost	30.74	35.88	30.34
Vet/Medicine & Supplies	25.31	27.58	21.91
Building/Fence Repairs	13.86	10.29	8.94
Miscellaneous	38.94	30.85	25.17
Total Other Cost	78.11	68.72	56.02
Operating Interest	40.05	27.71	24.90
Total Cash Expenses	$ 486.04	$ 397.21	$ 357.01
Net Cash Income	$- 4.18	$ 67.79	$ 164.35
Non-Cash Expenses			
Building Depreciation	$ 3.75	$ 3.36	$ 3.31
Machinery Depreciation	22.94	33.29	23.55
Total Non-Cash Expenses	$ 26.69	36.65	26.86
Total Cost of Production	$ 511.73	$ 433.86	$ 383 87
Net Farm Income	$- 30.87	$ 31.14	$ 137.49

Table 3
COW FINISH ENTERPRISES
$ Per Cow

	1982 All Farms	1982 Above Average Farms
Number of Cows	48	58
Calf Percent	87%	88%
Number of Bulls	2	2
Investment		
Buildings	$ 56.06	$ 29.41
Equipment	161.81	135.48
Livestock	645.18	710.22
Total Investment	$ 863.05	$ 875.11
Income		
Bulls	$ 30.04	$ 41.17
Cows	45.23	45.88
Calves	.85	-
Feeders	26.54	53.36
Slaughters	459.06	406.41
Other Income	36.10	46.60
Inventory Change	25.48	59.66
Total Income	$ 623.30	$ 653.08
Cash Expenses		
Bulls Purchased	$ 7.85	$ 3.59
Cows Purchased	10.42	13.59
Feeders Purchased	.81	1.47
Total Livestock Purchased	19.08	18.65
Grazing Costs	16.85	20.82
Feed Grain	192.75	182.43
Roughage	82.65	75.31
Bedding	22.08	22.40
Total Feed Cost	314.33	300.96
Fuel & Lubrication	18.98	18.27
Machinery Repairs	14 08	13.41
Total Machinery Cost	33.06	31.68
Vet/Medicine & Supplies	33.21	23.62
Building/Fence Repairs	11.92	6.97
Miscellaneous	53.38	37 31
Total Other Cost	98.51	67.90
Operating Interest	34.85	31.43
Total Cash Expenses	$ 499.83	$ 450.62
Net Cash Income	$ 123.47	$ 202.46
Non-Cash Expenses		
Building Depreciation	$ 2.60	$ 1 60
Machinery Depreciation	26.85	24.16
Total Non-Cash Expenses	29.45	25.76
Total Cost of Production	$ 529.28	$ 476.38
Net Farm Income	$ 94.02	$ 176.70

Table 4
Cow Yearling Enterprises That Purchased Feeders
$ Per Cow

	1982 All Farms	1982 Above Average Farms
Number of Cows	31	33
Calf Percent	96%	96%
Number of Bulls	1	1
Investment		
Buildings	$ 136.22	$ 143.87
Equipment	126.65	136.21
Livestock	675.00	684.36
Total Investment	$ 937.87	$ 964.44
Income		
Bulls	$ 13.96	$ 18.39
Cows	66.26	72.91
Calves	126.48	84.52
Feeders	270.06	301.12
Slaughters	167.87	220.78
Other Income	27.71	36.42
Inventory Change	297.26	400.97
Total Income	969.60	1,135.11
Cash Expenses		
Bulls Purchased	$ 8.29	$ 10.91
Cows Purchased	40.23	52.91
Feeders Purchased	321.52	382.58
Total Livestock Purchased	370.04	446.40
Grazing Costs	14.16	18.64
Feed Grain	187.58	172.64
Roughage	61.84	63.82
Bedding	27.06	25.48
Total Feed Cost	290.64	280.58
Fuel & Lubrication	26.74	24.30
Machinery Repairs	21.00	17.42
Total Machinery Cost	47.74	41.72
Vet/Medicine & Supplies	44.19	47.45
Building/Fence Repairs	13.58	15.45
Miscellaneous	56.65	53.15
Total Other Cost	114.42	116.05
Operating Interest	61.71	65.95
Total Cash Expenses	$ 884 55	$ 950.70
Net Cash Income	$ 85.05	$ 184.41
Non-Cash Expenses		
Building Depreciation	$ 6.77	$ 7.00
Machinery Depreciation	19.81	20.84
Total Non-Cash Expenses	26.58	27.84
Total Cost of Production	$ 911.13	$ 978 54
Net Farm Income	$ 58.47	$ 156.57

Table 5
Cow Finish Enterprises That Purchased Feeders
$ Per Cow

	1982 All Farms	1982 Above Average Farms
Number of Cows	49	63
Calf Percent	88%	91%
Number of Bulls	1	2
Investment		
Buildings	$ 185.42	$ 370.35
Equipment	217.35	348.37
Livestock	593.79	743.34
Total Investment	$ 996.56	1,462.06
Income		
Bulls	$ 56.86	$ 144.00
Cows	57.37	75.25
Calves	-	-
Feeders	76.41	56.02
Slaughters	922.55	1,663.25
Other Income	180.12	433.62
Inventory Change	103.88	-40.40
Total Income	$ 1,397.19	$ 2,331.74
Cash Expenses		
Bulls Purchased	$ 8.43	$ 12.06
Cows Purchased	24.86	50.75
Feeders Purchased	406.69	688.22
Total Livestock Purchased	439.98	751.03
Grazing Costs	15.10	15.33
Feed Grain	230.84	335.29
Roughage	96.53	107.57
Bedding	28.92	33.81
Total Feed Cost	371.39	492.00
Fuel & Lubrication	25.10	40.43
Machinery Repairs	16.00	26.41
Total Machinery Cost	41.10	66.84
Vet/Medicine & Supplies	43.00	71.92
Building/Fence Repairs	17.22	18.06
Miscellaneous	84.89	157.62
Total Other Cost	145.11	247.60
Operating Interest	74.82	116.81
Total Cash Expenses	$ 1,072.40	$ 1,674.28
Net Cash Income	$ 324.79	$ 657.46
Non-Cash Expenses		
Building Depreciation	$ 9.27	$ 18.46
Machinery Depreciation	35.41	54.44
Total Non-Cash Expenses	44.68	72.90
Total Cost of Production	$ 1,117.08	$ 1,747.18
Net Farm Income	$ 280.11	$ 584.56

Break-Even Selling Prices

Tables 6, 7, and 8 indicate the break-even selling prices for calves, feeder cattle and finished cattle, respectively.

Table 6 gives the break-even selling prices for various calf weights, assuming a 10% return on investment and a labour return of $100/cow. Feeder cattle break-even prices are shown in Table 7, assuming a 10% return on investment and a labour return of $125/cow. Finally, Table 8 indicates the break-even selling prices for finished cattle at various weight categories, assuming a labour return of $150/cow and a 10% return on investment.

Table 6

Break-Even Selling Prices for Calves

Weight/Calf	400	425	450	500	525	600
Break-Even Price	$ 1.23/lb	$ 1.16/lb	$ 1.09/lb	$ 0.98/lb	$ 0.94/lb	$ 0.89/lb

Table 7
Break-Even Selling Prices for Feeders

Weight/Feeder	600	650	700	750	800	900
Break-Even Price	$ 1.08/lb	$ 0.99/lb	$ 0 92/lb	$ 0 86/lb	$ 0.81/lb	$ 0.72/lb

Table 8
Break-Even Prices for Finished Cattle

Weight/Finished Animal	1000	1050	1100	1150	1200
Break-Even Price	$ 0.83/lb	$ 0.79/lb	$ 0.75/lb	$ 0.72/lb	$ 0.69/lb